CLAIMS

1. A multi-layered material having at least an inner layer and an outer layer of woven cloth of plastic fibers and a middle layer, the middle layer comprising pellets in a matrix of a loose array of randomly oriented fibers or a loose array of parallel oriented fibers, said layers.being bound together transversely.

2. A material according to claim 1, comprising a middle layer of pellets in a loose array of randomly oriented fibers.

3. A material according to claim 1, comprising a middle layer of pellets in a loose array of parallel oriented fibers.

4. A material according to claim 1, comprising a middle layer of pellets in a loose array of randomly oriented fibers, and a layer of pellets in a loose array of parallel oriented fibers.

5. A material as in claim 1, comprising a layer of pellets in a loose array of parallel oriented fibers, and on each side thereof a layer of pellets in a loose array of randomly oriented fibers.

6. A material as in claim 1 formed into shapes suitable for soft body armor.

7. A material as in claim 1, wherein said randomly oriented or parallel fibers are made of aramid, nylon or other synthetic compositions.

8. A material as in claim 1, wherein said randomly oriented or parallel fibers are made of natural fibers.

9. A material as in claim 1, wherein said pellets are of the size 2-10 mm in cross-section and formed of thermoplastic resins.

10. A material as in claim 1, wherein said matrix is formed of a flexible material that will form a solid continuum with fibers, pellets and matrix material in sheet form when heated.

11. A material according to claim 1, wherein the layers are cross-linked by stitching.

12. A material according to claim 1, wherein the layers are cross-linked by heating.

13. A material according to claim 1, wherein the layers are cross-linked with adhesives at periodic points of intersection of the layers.

14. A method for forming the matrix of claim10, wherein pellets and fibers are mixed into a solution of curable silicone compound and poured into a form to create a thin layer upon curing.

15. The method of claim 14, wherein the pellets, fibers and solution are mixed at a ratio of 40% pellets, 25% fibers and 35% silicone solution.

16. A multi-layered soft body armour material having an inner layer (1) and an outer layer (5) of woven cloth of plastic fibers, a middle layer (2), comprising pellets in a matrix of a loose array of randomly oriented fibers, a middle layer (3) comprising pellets in a loose array of parallel oriented fibers, and a middle layer (4) comprising pellets ina a matrix of a loose array of randomly oriented fibers, said layers being bound together transversely, said randomly oriented or parallel fibers being made of aramid or nylon, said pellets are of the size 2-10 mm in cross-section and formed of thermoplastic resins, said matrix is formed of a flexible material that will form a solid continuum with fibers, pellets and matrix material in sheet form when heated, and the layers are cross-linked by stitching.